

Abstract

An apparatus and method of controlling an electric motor (26) having a rotor (34) that is formed from a series of laminations (48) and has a plurality of rotor poles (36) and a stator (30) that encircles the rotor (34) and has a plurality of stator poles (32), each with a respective stator winding (38). A first sensor (46) senses actual inductance in the respective stator winding (38). A second sensor (46) senses a position of the rotor (34) relative to the stator (30). A controller (42) determines a reference inductance based on the rotor position signal, determines a difference between the actual inductance and the reference inductance, and prevents further energization of the stator windings (38) when the difference exceeds a predetermined amount.